

Claims

1. A star connected wound rotor for a miniature electric motor comprising: a
 5 shaft; an armature core fitted to the shaft and having a plurality of armature poles; a commutator having a plurality of commutator segments for making sliding contact with a brush assembly, the commutator being fitted to the shaft adjacent a first end of the armature core; a star connector; and a plurality of coils forming an armature winding, each coil being wound around an armature pole and being terminated on a
 10 segment of the commutator and on the star connector, characterized in that
 the star connector comprises a base of insulating material fitted to the shaft adjacent a second end of the armature core and a terminal ring of conductive material fitted to the base and having a number of terminals connected to the coils, thereby forming a star connected armature winding.
 15
2. A rotor as defined in claim 1 wherein the base has at least one detent for keying the terminal ring to the base to prevent relative rotational movement therebetween.
- 20 3. A rotor according to claim 1, wherein the base has a cylindrical portion for receiving the terminal ring and the terminal ring has a split with a free internal diameter less than the diameter of the cylindrical portion.
4. A rotor according to claim 1, wherein the terminal ring is formed from sheet
 25 material of copper or copper alloy.
5. A rotor according to claim 1, wherein the base is molded from insulating resin material.
- 30 6. A star connector for a wound rotor of a miniature electric motor comprising a base of insulating resin material and a terminal ring of conductive material fitted to the base and having a number of terminals for connection of one end of each coil of the wound rotor.
- 35 7. A star connector according to claim 6, wherein the base has a cylindrical portion for receiving the terminal ring and the terminal ring is split with a free internal diameter less than or equal to the diameter of the cylindrical portion.

8. A star connector according to claim 6, wherein the terminal ring is formed from sheet material containing copper.
9. A star connector according to claim 6, wherein the base has at least one detent
5 for keying the terminal ring to the base to prevent the terminal ring from rotating about the base.
10. A star connector according to claim 6, wherein the base is adapted to receive a shaft of the motor and to function as a spacer.
- 10 11. A star connector for electrically connecting together lead wires from coils of a wound rotor of a miniature d.c. electric motor, the connector comprising:
a base for direct mounting onto a shaft of the rotor; and
a conductive ring having terminals for termination of the lead wires;
15 wherein the base has a central boss portion with a central opening for receiving the shaft, a wall extending radially from the boss, a skirt extending axially from the radially outer edge of the wall, a number of openings in the skirt and a number of buttresses formed on the wall and the base remote from the skirt but adjacent the openings, and
20 wherein the conductive ring has a flat ring portion located against the wall of the base and supported by the skirt and having a number of terminals extending radially from the ring portion, each terminal having an axially U-shaped portion, the terminals extending through the openings in the skirt with the U-shaped portions located radially adjacent the buttresses.
- 25 12. A star connector according to claim 11, wherein the skirt has a tapered inner surface forming a mouth.
13. A star connector according to claim 11, wherein the skirt has a plurality of
30 detents for retaining the connector ring against the radial wall.
14. A star connector according to claim 11, wherein the base has a number of detents for retaining the connector ring against the radial wall.